

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND**

**LEADING TECHNOLOGY
COMPOSITES, INC.,**

v.

MV2, LLC.

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Civil Action No. CCB-19-1256

MEMORANDUM

Leading Technology Composites, Inc. (“LTC”) brings this patent infringement action against MV2, LLC (“MV2”), alleging that MV2’s armor panels with edge trim infringe on U.S. Patent No. 8,551,598 (the “598 patent”), belonging to LTC. This matter is now before the court for claim construction. The issues have been fully briefed and a hearing was held on February 7, 2020. The court will address the following terms identified by the parties: (1) “An armoring panel for resisting edge impact penetrations by ballistic projectiles”; (2) “A strata”; (3) “An outer stratum, an inner stratum”; (4) “First durable sheet”; (5) “Directly laterally overlies”; (6) “A bonding matrix”; (7) “Each sheet among the plurality of second durable sheets underlying overlying the at least first durable sheet”; (8) “The inner and outer durable sheets’ oppositely lateral extensions”; and (9) “The armoring panel of claim 6 further comprising outer and inner materials saving voids, said voids respectively extending oppositely laterally from lateral ends of the durable sheets’ outer and inner oppositely lateral extensions.” (*See* ECF 51-1, Parties’ Joint Claim Construction Statement).

DISCUSSION

The court construes patent claims as a matter of law. *See Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). As explained by the Federal Circuit, “words of a claim are generally given their ordinary and customary meaning,” and “the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of

ordinary skill in the art in question at the time of the invention.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc) (citations and internal quotation marks omitted). “A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.” *Merck & Co., Inc. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005).

The court should first consider the “words of the claims themselves” as they “provide substantial guidance as to the meaning of particular claim terms.” *Cont’l Circuits LLC v. Intel Corp.*, 915 F.3d 788, 796 (Fed. Cir. 2019) (quoting *Phillips*, 415 F.3d at 1314). This includes the claim in which the disputed term is used, and the other claims of the patent. *Phillips*, 415 F.3d at 1314. The court should also consider the specification. The specification “is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Cont’l Circuits, LLC*, 915 F.3d at 796 (citation omitted). The court should also consider the prosecution history. “Like the specification, the prosecution history provides evidence of how the [United States Patent and Trademark Office (“PTO”)] and the inventor understood the patent.” *Id.* (quoting *Phillips*, 415 F.3d at 1317). For example, if the inventor limited the invention in the course of prosecution, or disclaimed an interpretation of the invention, then this would narrow the patent’s scope. *Phillips*, 415 F.3d at 1317. The Federal Circuit has cautioned, though, that “because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.*

The court may also consider extrinsic evidence, which is “all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned

treatises.” *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995)). While extrinsic evidence may be “useful,” it is considered “less reliable than the patent and its prosecution history” and is “unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Id.* at 1318–19.

1. “An armoring panel for resisting edge impact penetrations by ballistic projectiles” of claim 1.

Both parties agree that the preamble is a limitation on the claim. MV2 argues that the preamble to claim 1 is indefinite. Because MV2 will be barred from challenging the validity of the patent due to the doctrine of assignor estoppel, which will be addressed in a separate memorandum, MV2 is estopped from arguing the preamble is indefinite. *See MAG Aerospace Indus., Inc. v. B/E Aerospace, Inc.*, 816 F.3d 1374, 1379–80 (Fed. Cir. 2016) (“Assignor estoppel is an equitable remedy that prohibits an assignor of a patent, or one in privity with an assignor, from attacking the validity of that patent when he is sued for infringement by the assignee.”); *Laporte Pigments, Inc. v. Axel J., LP*, 44 F. App’x 960, 962, 964 (Fed. Cir. 2002)¹ (the court noted, with regard to the defendant’s argument that a term should be construed narrowly since a broader construction “would be invalid for indefiniteness or lack of enablement,” *id.* at 962, that “[i]n any event, we cannot consider the validity of the claim, as Axel is estopped from asserting the invalidity of the patent,” *id.* at 964). As no party requests the preamble to be construed, the court will not construe the preamble.

2. “A strata” of claim 1.

LTC argues there is no need for construction of this term or, alternatively, it should be construed as “a set of multiple stratum.” MV2 argues that it should be construed as “at least four layers of the armor panel.”

¹ Unreported cases are cited for the soundness of their reasoning, not for any precedential value.

The court finds there is no need for construction. MV2's suggestion would have the claim read, in part: "*At least four layers of the armor panel* comprising an outer stratum, an inner stratum, and a plurality of intermediate stratus." As the rest of the claim already describes that the "strata" must include at least four stratus, MV2's proposal seems unnecessary and not likely to help a factfinder better understand "strata." Therefore, the court will not construe the term.

3. "An outer stratum, an inner stratum" of claim 1.

LTC argues there is no need for construction. MV2 argues that this term should be construed as "an outermost stratum, an innermost stratum."

The court finds that MV2's proposed construction does not further clarify the term. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) ("Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy."); *Card-Monroe Corp. v. Tuftco Corp.*, No. 1:14-CV-292, 2016 WL 3212085, at *6 (E.D. Tenn. June 9, 2016) (declining to construe a term when the proposed construction "does not meaningfully clarify the term"). Here, the meaning of "outer stratum" and "inner stratum" with respect to the strata described in claim 1 is clear. Further, MV2's proposed construction is likely to confuse the factfinder, as "innermost" could mean the stratum closest to the center of the panel, which neither party contends "inner" means. Therefore, the court will not construe the term.

4. "First durable sheet" of claim 1.

LTC argues that this term should be construed as “a rigid sheet that suppresses projectile penetrations from bullets that impact at or near the panel’s edge.” MV2 argues that the term should be construed as “an overlying (or outermost) ballistic fiber sheet component.”

MV2’s proposal that the first durable sheet should be construed as a “ballistic fiber sheet component” has support in the specification. According to the specification, “in the instant invention, ballistic fiber sheet components are caused to perform multiple functions. For example, the at least first durable sheet component of the instant invention . . .” (‘598 patent, col. 2, lines 63–66). “[T]he distinction between using the specification to interpret the meaning of a claim and importing limitations from the specification into the claim can be a difficult one to apply in practice.” *Phillips*, 415 F.3d at 1323. In consulting the specification, the court should consider “whether the patentee is setting out specific examples of the invention to accomplish those goals, or whether the patentee instead intends for the claims and the embodiments in the specification to be strictly coextensive.” *Id.* The specification’s use of the phrase “in the instant invention” indicates that the fact that the “first durable sheet” is an example of the “ballistic fiber sheet components” is a feature of the invention, rather than a specific embodiment. *See Blackbird Tech LLC v. ELB Elecs., Inc.*, 895 F.3d 1374, 1377 (Fed Cir. 2018) (when the specification refers to the feature as the “present invention,” it may indicate that the feature is an important or critical part of the invention) (collecting cases).

At oral argument, however, LTC’s counsel argued that if the court construed the term “first durable sheet” to mean a “ballistic fiber sheet component,” the parties might dispute what a “ballistic fiber sheet” is. To mitigate any possible future dispute, the court will construe the term to make clear that ballistic fiber sheets at least include sheets made from the materials specified in the patent, which includes glass fibers. (‘598 patent, col. 2, lines 49–55).

The court does not accept MV2's proposed construction that the first durable sheet is the "overlying (or outermost)" sheet. MV2 relies on the specification, which states that "[e]ach sheet among such plurality of sheets has, like the overlying at least first durable sheet, outer and inner oppositely lateral extensions." (598 patent, col. 2, lines 39–42). The court, however, is convinced that a person of ordinary skill in the art would understand that the specification describes the invention from the "outside-in" and the claims describe the invention from the "inside-out." That is, "first" as used in the specification refers to the overlying and outermost durable sheet of the panel, but "first" as used in the claims refers to the durable sheet closest to the intermediate stratus. Particularly, LTC amended claim 4 during prosecution to state that the plurality of second durable sheets overlies, rather than underlies, the first durable sheet, with "such amendment being for the purpose of consistency with Amended Claim 1" (ECF 61-5 at 4), indicating that the first durable sheet in claim 1 is not an overlying and outermost sheet.² Therefore, the court will not import the specification's description of the "at least first durable sheet" as overlying and outermost into the claims.

The court will also decline to construe "durable" as "rigid" or "rigid but not inflexible," which was discussed during oral argument. Nowhere in the patent is the first durable sheet described as "rigid." Finally, the court will otherwise change LTC's proposed construction so it matches the preamble of claim 1.

Therefore, the court will construe "first durable sheet" as: **a ballistic fiber sheet component, composed of material including those referenced in the patent (for example, glass fibers), for resisting edge impact penetrations by ballistic projectiles.**

5. "Directly laterally overlies" of claim 1.

LTC argues that there is no need for construction. MV2 argues that the term

² In claim 4 of the patent, "overlying" was added, but "underlying" was not deleted. This will be addressed *infra*.

is indefinite³ or, alternatively, it should be construed as “contacts.”

According to the prosecution history, LTC originally submitted its claim with the term “laterally overlies.” The claim, as first submitted, was found to be anticipated by another patent (ECF 61-3, Ex. B to MV2’s Opening Claim Construction Brief), so LTC made several changes to the claim, one of which was to replace “laterally overlies” with “contacts.” LTC’s argument/remarks made in an amendment (ECF 61-5, Ex. D to MV2’s Opening Claim Construction Brief), submitted to the PTO, states that claim 1, in order to more clearly distinguish it from an existing patent (Henry ‘667), was amended in part “to specify that the delamination resisting tie section’s oppositely lateral surface contacts the intermediate stratum’s lateral ends.” (ECF 61-5 at 3). The examiner, with authorization from LTC’s attorney, later amended claim 1’s “contacts” to “directly laterally overlies.” (ECF 61-6 at 8, Notice of Allowability, Examiner’s Amendment). It is not clear why the examiner made this amendment.

“Directly laterally overlies” cannot mean “contacts,” because the claim was amended from “contacts” to “directly laterally overlies.” Although LTC at one point used the term “contacts,” “the prosecution history represents an ongoing negotiation between the PTO and the applicant.” *Phillips*, 415 F.3d at 1317. Here, the fact that the term was again amended indicates that its meaning changed – from “contacts,” to a position that directly laterally overlies but need not actually contact. This is also supported by the specification, which, in reference to Figure 1 of the patent, states that the delamination resisting tie section (marked as 2t) “directly laterally overlies the lateral ends of the intermediate stratum[s].” (‘598 patent, col. 3, lines 63–65). The same delamination resisting tie section marked as 2t is also shown in Figure 3 *not* contacting the lateral ends of the intermediate stratum[s], indicating that “directly laterally overlies” as used in

³ For the reasons explained in a separate memorandum, MV2 is estopped from arguing that this term is indefinite.

the specification does not mean “contacts.” Therefore, the court finds that MV2’s proposed construction is not correct. LTC argues that the term need not be construed, and the court agrees.

6. “A bonding matrix” of claim 1.

LTC argues that there is no need for construction. MV2 argues the term should be construed as “a homogeneous material that is interstitially disposed between stratum to collectively form the strata into the armor panel.”

The court does not find that it would be helpful to a factfinder to construe the term “bonding matrix.” Here, the claim states that the bonding matrix “interconnect[s] the strata’s stratum.” (‘598 patent, claim 1(c)). The term “bonding matrix,” especially in light of the rest of the claim, is self-evident. MV2 points to the specification in support of its proposed construction. The specification states, “the instant inventive armoring panel comprises a bonding matrix which fixedly and rigidly interconnects the strata’s stratum, such matrix being interstitially disposed with respect to the stratum, to collectively form the stratum into the rigid armoring panel.” (‘598 patent, col. 2, lines 7–11). The specification’s description is in line with the ordinary meaning of bonding matrix. MV2’s proposed construction, which borrows from the specification’s language, does not further clarify the term. *See U.S. Surgical Corp*, 103 F.3d at 1568; *Card-Monroe Corp*, 2016 WL 3212085, at *6.

Additionally, MV2’s proposed construction contains a limitation not supported by the patent. The patent does not state that the matrix must be “homogenous.” MV2 argues that Figure 7 of the patent shows a “singular bonding matrix” and no examples show a non-homogenous matrix. Figure 7, though, does not seem to refer to what materials comprise the matrix, and there is nothing in the patent that provides that the bonding matrix must be made of the same material throughout. Therefore, the court will not construe the term.

7. “Each sheet among the plurality of second durable sheets underlying overlying the at least first durable sheet” of Claim 4.

LTC argues that the term “underlying overlying” should be corrected to “overlying.” MV2 argues the term is indefinite or, alternatively, that “underlying overlying” should be construed as “underlying.”

“[A] district court can [correct an error in a patent] only if (1) the correction is not subject to reasonable debate based on consideration of the claim language and the specification and (2) the prosecution history does not suggest a different interpretation of the claims.” *Novo Indus., L.P. v. Micro Molds Corp.*, 350 F.3d 1348, 1354 (Fed. Cir. 2003). The Federal Circuit appears to have interpreted the first factor to require that “the error [must be] evident from the face of the patent.” *H-W Tech., L.C. v. Overstock.com, Inc.*, 758 F.3d 1329, 1333 (Fed. Cir. 2014) (quoting *Grp. One, Ltd v. Hallmark Cards, Inc.*, 407 F.3d 1297, 1303 (Fed. Cir. 2005)).

Here, the error is evident from the face of the patent because “underlying overlying” makes no sense. See *Visual Networks Operations, Inc. v. Paradyne Corp.*, No. CIV.A. DKC 2004-0604, 2005 WL 1411578, at *16 (D. Md. June 15, 2005) (“The uncorrected claim is nonsensical[.]”). Further, the correction is not subject to reasonable debate. The prosecution history clearly shows that LTC amended Claim 4 to replace “underlying” with “overlying.” (Applicant’s Argument/Remarks Made in an Amendment, ECF 61-5 at 4 (“Claim 4 has been amended to change the word ‘underlying’ to ‘overlying’ . . .”)); see *Hoffer v. Microsoft Corp.*, 405 F.3d 1326, 1331 (Fed. Cir. 2005) (district court could correct error where dependent claim referred to the wrong independent claim because “[t]his error in dependency of claim 22 is apparent on the face of the printed patent, and the correct antecedent claim is apparent from the prosecution history”); *Fargo Elecs., Inc. v. Iris, Ltd., Inc.*, 287 F. App’x 96, 102 (Fed. Cir. 2008) (“the prosecution history should be consulted to ascertain whether there is only a single

reasonable construction”). There is no evidence in the prosecution history that this amendment was rejected; instead, the fact that “overlying” is included in claim 4 of the patent indicates that the amendment was accepted, and “underlying” should have been deleted.

The court will therefore construe the term as: **each sheet among the plurality of second durable sheets overlying the at least first durable sheet.**

8. “The inner and outer durable sheets’ oppositely lateral extensions” of claims 5 and 6.

LTC argues the term should be corrected to “the durable sheets’ outer and inner oppositely lateral extensions.” MV2 argues the term is indefinite.

The court will correct the term. First, the error is evident on the face of the patent. The specification and the antecedent claims all refer to “first” and “second” durable sheets that each have “outer and inner oppositely lateral extensions.” Upon a close reading, it would be clear that there are no such things as “inner and outer durable sheets” with respect to the invention.

Additionally, the correction is not subject to reasonable debate. The rest of the patent uses the phrase “outer and inner oppositely lateral extensions.” Particularly, the following claim, claim 7, which is dependent on claim 6, refers to the “durable sheets’ outer and inner oppositely lateral extensions.” See *Quanergy Systems, Inc. v. Velodyne Lidar, Inc.*, No. 16-cv-05251-EJD, 2017 WL 4410174, at *14 (N.D. Cal. Oct. 4, 2017) (where claim later read that “this pairing ‘form[s] a plurality of pairs of laser emitters and avalanche photodiode detectors’” there was no reasonable debate that the preceding part should have stated “avalanche photodiode detectors” instead of “photon detectors.”). In light of the specification and the claims, which use “first” and “second” to refer to the durable sheets, and “outer and inner” to refer to the lateral extensions, it is not subject to reasonable debate that the claim should be read in accordance with LTC’s

construction. Therefore, the court will construe the term as: **the durable sheets' outer and inner oppositely lateral extensions.**

9. **"The armoring panel of claim 6 further comprising outer and inner materials saving voids, said voids respectively extending oppositely laterally from lateral ends of the durable sheets' outer and inner oppositely lateral extensions" of claim 7.**

LTC argues there is no need for construction. MV2 argues the element is indefinite. As MV2 is estopped from arguing indefiniteness and LTC argues there is no need for construction, the court will not construe the claim.

CONCLUSION

For the above stated reasons, the court will construe the disputed terms as described above. A separate order follows.

2/18/20
Date

CCB
Catherine C. Blake
United States District Judge